

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-22. (Cancelled)

23. (Currently amended) A ~~computer-readable~~
~~medium having processor-executable instructions, which when~~
~~executed by a processor, perform a method for calculating~~
values for pixels of an image in a graphics processing
system comprising anti-aliasing circuitry and a memory,
wherein having the pixels of the image are arranged in rows
and columns parallel to first and second perpendicular
axes, respectively, the method comprising:

calculating, in the anti-aliasing circuitry,
sample values for the pixels of the image in accordance
with a plurality of sampling rates, wherein:

a sampling rate is defined by the number of
samples per pixel used to calculate sample values for each
pixel having at least one sample and at least one sample
per pixel, and

the sampling rates for at least three
consecutive pixels in one of the same row and the same
column of pixels alternate per pixel between at least first
and second sampling rates the sampling rate differing for
~~at least two pixels of the image and alternating per pixel~~
~~for consecutive pixels along lines parallel to one or the~~
~~other axes of the image for at least some of the horizontal~~
~~or vertical lines of pixels of the image, the at least two~~
~~pixels having the differing sampling rates belonging to a~~

~~sampling rate set and the sampling rate set repeated for
the pixels along the horizontal or vertical lines;~~

calculating, in the anti-aliasing circuitry,
values for the pixels of the image from respective
calculated sample values; and

storing, in the memory, the values for the pixels
as graphics data for the image for use in displaying an
anti-aliased image.

24. (Cancelled)

25. (Currently amended) The method of claim 23
wherein the sampling rate is constant for the pixels
arranged along any of the rows ~~given line parallel to the
first axis~~ and varies among the plurality of sampling rates
for the pixels arranged along any of the columns ~~given line
parallel to the second axis.~~

26. (Currently amended) The method of claim 25
wherein the first and second sampling rates alternate per
pixel for consecutive pixels in any of the columns ~~line
parallel to the second axis.~~

27. (Currently amended) A ~~computer-readable medium having processor-executable instructions, which when executed by a processor, perform a~~ method for calculating values for pixels of an image in a graphics processing system comprising anti-aliasing circuitry, wherein ~~having~~ the pixels of the image are arranged in rows and columns parallel to first and second perpendicular axes, respectively, the method comprising:

calculating, in the anti-aliasing circuitry, sample values for pixels of the image in accordance with first and second sampling rates, wherein:

a sampling rate is defined by the number of samples per pixel used to calculate sample values for each pixel having at least one sample ~~and at least one sample per pixel,~~

the sampling rate ~~remaining~~ remains constant for consecutive pixels arranged along any one of the rows ~~given line parallel to the first axis,~~ and

the sampling rates ~~varying~~ alternate a plurality of times between the first sampling rate and the second sampling rate ~~between the first and second sampling rates~~ for at least three consecutive pixels arranged along any one of the columns ~~given line parallel to the second axis;~~

calculating, in the anti-aliasing circuitry, values for the pixels of the image from respective calculated sample values; and

providing, from the anti-aliasing circuitry, the calculated values as graphics data for the image.

28. (Currently amended) The method of claim 27 wherein ~~the pixels of the image are arranged in rows~~

~~parallel to the first axis and columns parallel to the second axis,~~ and the first and second sampling rates alternate every row of pixels.

29. (Original) The method of claim 27 wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel.

30. (Original) The method of claim 27 wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, the two sample locations per pixel for the first sampling rate arranged within a pixel along a line forming an acute angle with respect to either the first or second axes.

31. (Original) The method of claim 27 wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, the two samples per pixel for the first sampling rate arranged within a pixel substantially along and on opposite sides of a line parallel to either the first or second axes that divides the pixel in two, the axis to which the line is parallel alternating per consecutive pixel arranged along a line parallel to the first axis.

32. (Original) The method of claim 31 wherein the two samples per pixel of the first sampling rate vary for every other consecutive pixel lying along a line parallel to the first axis between a given sampling pattern and another sampling pattern which is substantially the same pattern rotated 90 degrees.

33-97. (Cancelled)

98. (New) The method of claim 23, wherein the first sampling rate is two samples per pixel and the second sample is one sample per pixel.

99. (New) The method of claim 23, wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, and wherein the two sample locations per pixel for the first sampling rate is arranged within a pixel along a line forming an acute angle with respect to either the first or second axes.

100. (New) The method of claim 23, wherein calculating the sample values comprises:

calculating at least one sample value for a first pixel of the at least three consecutive pixels based on the first sampling rate and a first sampling pattern;

calculating at least one sample value for a second pixel of the at least three consecutive pixels based on the second sampling rate; and

calculating at least one sample value for a third pixel of the at least three consecutive pixels based on the first sampling rate and a second sampling pattern.

101. (New) The method of claim 100, wherein the second sampling pattern is rotated ninety degrees relative to the first sampling pattern.

102. (New) The method of claim 23, wherein the at least three consecutive pixels are located in a first

column, and wherein at least three consecutive pixels in a second column of pixels alternate per pixel between at least the first sampling rate and a second sampling rate.

103. (New) The method of claim 23, wherein the at least three consecutive pixels are located in a first row, and wherein at least three consecutive pixels in a second row of pixels alternate per pixel between at least the first sampling rate and a second sampling rate.

104. (New) The method of claim 27, wherein the sampling rates alternate between the first sampling rate and the second sampling rate at a constant frequency along the any one given line parallel to the second axis.

105. (New) The method of claim 27, wherein the sampling rates alternate per pixel between the first sampling rate and second sampling rate.

106. (New) A system for calculating values for pixels of an image having the pixels arranged in rows and columns, wherein the system comprises a memory and anti-aliasing circuitry configured to:

calculate sample values for the pixels of the image in accordance with a plurality of sampling rates, wherein:

a sampling rate is defined by the number of samples per pixel used to calculate sample values for each pixel having at least one sample, and

the sampling rates for at least three consecutive pixels in one of the same row and the same

column alternate per pixel between at least first and second sampling rates;

calculate values for the pixels of the image from respective calculated sample values;

store, in the memory, the values for the pixels as graphics data for the image.

107. (New) The system of claim 106, wherein the first sampling rate is two samples per pixel and the second sample is one sample per pixel.

108. (New) The system of claim 106, wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, and wherein the two sample locations per pixel for the first sampling rate is arranged within a pixel along a line forming an acute angle with respect to either the first or second axes.

109. (New) A system for calculating values for pixels of an image having the pixels arranged in rows and columns parallel to first and second perpendicular axes, respectively, wherein the system comprises anti-aliasing circuitry configured to:

calculate sample values for pixels of the image in accordance with first and second sampling rates, wherein:

a sampling rate is defined by the number of samples per pixel used to calculate sample values for each pixel having at least one sample,

the sampling rate remains constant for consecutive pixels arranged along any one of the rows, and

the sampling rates vary from the first sampling rate to the second sampling and back to the first sampling rate for at least three pixels arranged along any one of the columns;

calculate values for the pixels of the image from respective calculated sample values; and

provide the calculated values as graphics data for the image.

110. (New) The system of claim 109, wherein the first sampling rate is two samples per pixel and the second sample is one sample per pixel.

111. (New) The system of claim 109, wherein the first sampling rate is two samples per pixel and the second sampling rate is one sample per pixel, and wherein the two sample locations per pixel for the first sampling rate is arranged within a pixel along a line forming an acute angle with respect to either the first or second axes.

112. (New) The system of claim 109, wherein the sampling rates alternate between the first sampling rate and the second sampling rate at a constant frequency along the any one given line parallel to the second axis.

113. (New) The method of claim 109, wherein the sampling rates alternate per pixel between the first sampling rate and second sampling rate.